



VISION Z E R O

ACTION PLAN

Lexington, MA | 08.15.22

Let's eliminate all
traffic-related fatalities
and serious injuries.
Together.



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DEAR RESIDENTS & VISITORS OF LEXINGTON,

Lexington has long put roadway safety as a high priority. Unfortunately, serious injury and death is a reality on Lexington's roadways. Residents, workers, and visitors enjoy all that Lexington has to offer and making everyone's experience of our roadways safer whether it be by foot, bike, or car is a win for all. **Lexington aims to eliminate fatalities and serious injuries on our roads by 2035.**

After several months of work and community input, the Transportation Safety Group and its consultant, Environmental Partners, presented a Vision Zero plan to attain this goal. Lexington's Vision Zero Plan tackles this issue with the understanding that the responsibility is shared by all. **The plan outlines actions involving funding, departmental coordination, infrastructure changes, reporting, and education.**

The Select Board accepted this plan at a public meeting on August 15, 2022. **Lexington's government has always shared safety as a high-priority goal.** This plan shows how we all share the responsibility in making our roads safer. Together, we can eliminate serious injury and death on our roads.

Sincerely,



James Malloy

Town Manager | Lexington, MA



In Lexington, from 2015 - 2019

4

People

lost their lives

+

641

People

were injured



INTRODUCTION

Being able to move around safely within your community – whether in a car, on a bike, on foot, or getting around another way – is fundamental to quality of life.

Although Lexington has long made traffic safety a priority, people are still being seriously injured or killed on our roadways each year.

From 2015 to 2019, 4 people lost their lives in collisions and 641 people were injured. This is simply not acceptable; as a community, we must do better.

This Action Plan outlines the bold, ambitious actions that the Town is committed to taking to eliminate all traffic-related fatalities and serious injuries within Lexington by 2035.

Let's eliminate all
traffic-related fatalities
and serious injuries.



WHAT IS VISION ZERO?

Vision Zero is a transportation safety initiative that originated in Sweden in the 1990s to eliminate traffic crashes that result in deaths or serious injuries.

Since implementing Vision Zero practices nearly three decades ago, Sweden has become one of the safest places to travel in the world, with traffic deaths cut in half even with an increasing number of trips. Vision Zero is now gaining momentum worldwide, with more than 45 communities having committed to Vision Zero in the United States alone.

Vision Zero is based on the ethical belief that everyone has the right to move safely in their communities¹. Vision Zero policies generally share six common principles².

1 Transportation-related deaths and severe injuries are preventable and unacceptable. Crashes are not accidents – they are typically the result of poor behavior or substandard infrastructure.

2 Humans will make mistakes, and the transportation system should be designed such that those mistakes do not result in severe injury or death. While individuals are still responsible for abiding by traffic policies and laws, the primary focus should be on creating a safe system rather than attempting to perfect user behaviors.

3 Humans are vulnerable, and vehicle speeds must be managed to reduce crash severity. The transportation system should be designed for speeds that protect human life.

4 Responsibility is shared. Traffic safety is a multidisciplinary problem requiring collaboration between policy makers, engineers, planners, and public health professionals to achieve the goal of zero deaths and serious injuries.

5 A proactive approach to safety is needed. Instead of waiting for crashes to occur and reacting to them, a proactive, data-driven strategy should be used to identify and mitigate risks in the transportation system.

6 Redundancy is critical. All components of the transportation system must be strengthened so that in the event that one component fails, people are still protected by the other components.

HOW IS VISION ZERO DIFFERENT?

To achieve the goal of zero fatalities and serious injuries, a new approach to roadway engineering is needed.

In Vision Zero, government agencies employ the Safe System approach to eliminate fatalities and serious injuries. Whereas the traditional approach takes a backward-looking perspective, where all of the factors involved in a crash are analyzed to try to prevent such a crash from happening again, the Safe System approach proactively considers where crashes might occur in the future and identifies how such crashes can be prevented.

Did You Know?

Impact speed significantly increases a pedestrian's risk of severe injury or death³.



20 mph
impact speed
leads to an

18%

likelihood of fatality
or severe injury



30 mph
impact speed
leads to a

50%

likelihood of fatality
or severe injury



40 mph
impact speed
leads to a

77%

likelihood of fatality
or severe injury



WHY DOES LEXINGTON NEED VISION ZERO?

From 2014 to 2019, Lexington experienced approximately 641 injuries and four fatalities due to traffic collisions.

These deaths and serious injuries are preventable.

Although Lexington's transportation network is relatively safe compared to national standards, we believe that no deaths or serious injuries on our streets are acceptable. No one within our community should have to lose a loved one due to a traffic collision. That is why Lexington is committed to Vision Zero.

Stakeholder and community feedback on safety issues was critical for determining why crashes have occurred.





CONTEXT

Vision Zero is a data-driven process. In developing this action plan, we identified where crashes are occurring and who is most impacted to help proactively prevent crashes from occurring in the future.

Because data on contributing factors were not available from crash reports for the timeframe considered, stakeholder and community feedback on safety issues was critical for determining why crashes have occurred in the past and what safety interventions will be most effective at eliminating injuries and fatalities moving forward.



HIGH CRASH NETWORK






Based on a comprehensive review of town-wide crash data, 29 roadways have been identified as being in the High-Crash Network. These corridors are those that have experienced at least 10 crashes per mile annually within the 2015-2019 timeframe and represent Lexington's most dangerous streets and intersections for people walking, biking, and driving.

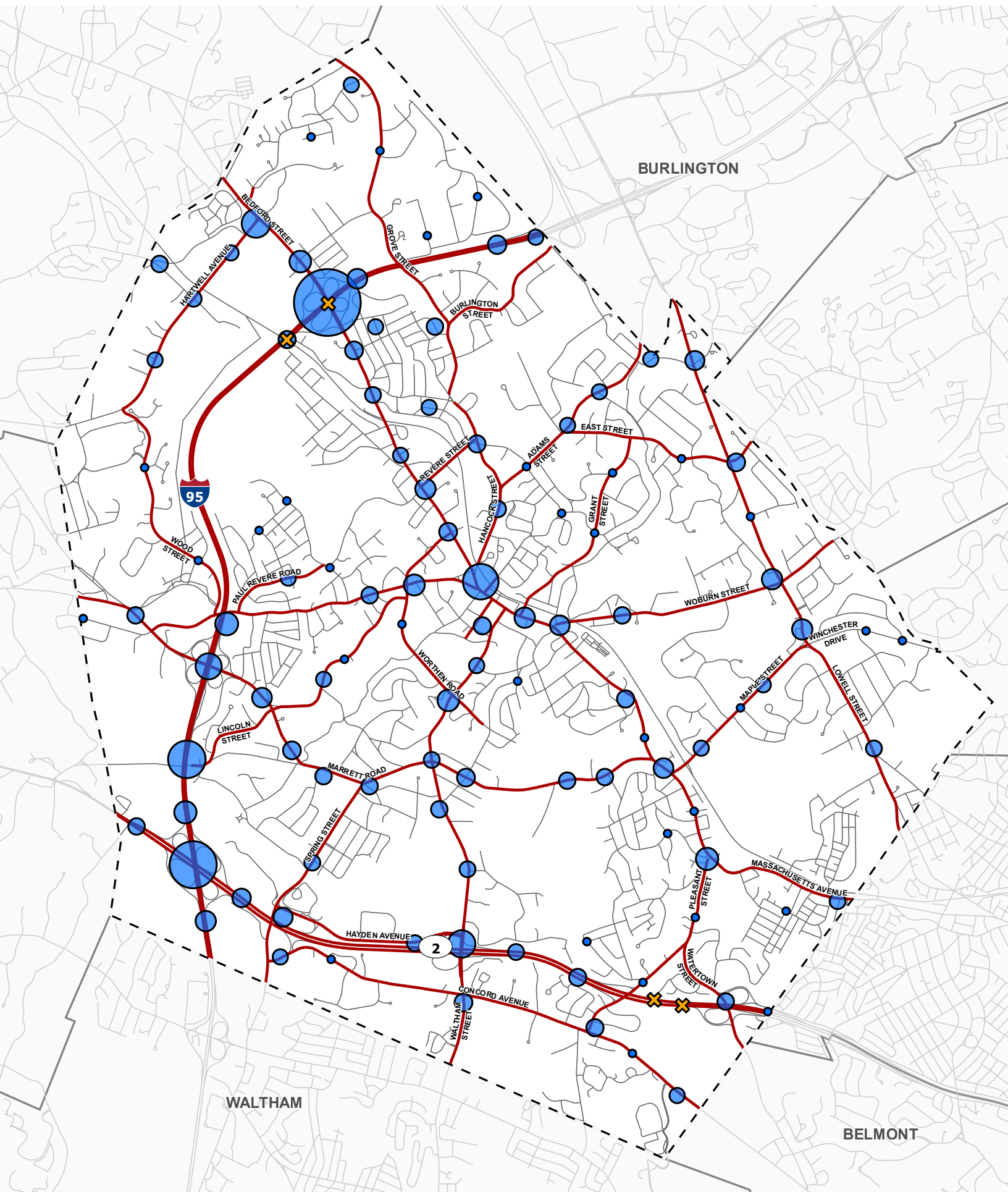
Of these 29 roadways, six (Interstate 95, Route 2, Hayden Avenue, Marrett Road, Maple Street, and Lowell Street) are under state jurisdiction; as such, the Town has limited ability to make safety improvements beyond advocating for improvements and coordinating with MassDOT. As such, the 23 roadways within the High Crash Network and under Town jurisdiction will be the Town's highest-priority safety improvement corridors.

< HIGH-CRASH NETWORK Lexington, MA

High-Crash Corridors 

High-Crash Intersections
(No. of Crashes)

-  10-15
-  16-20
-  21-35
-  36-50
-  51+





INJURIES & FATALITIES

Nearly all traffic-related injuries and fatalities occurred within the High-Crash Network, reinforcing the notion that safety investments should focus on this network.

< NON-FATAL INJURY & FATALITY CRASH LOCATIONS

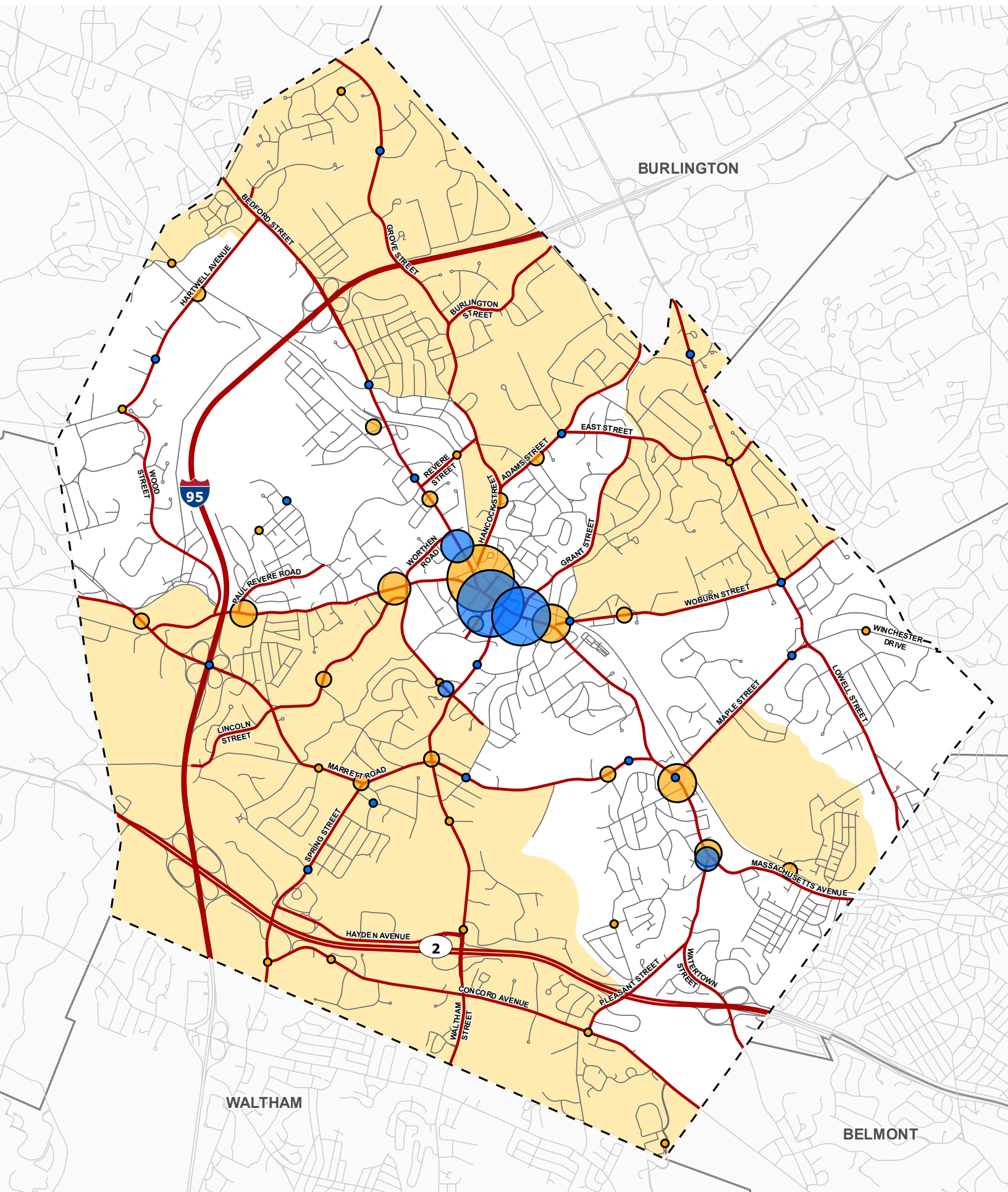
Lexington, MA

High-Crash Corridors —

✕ Fatal Crash Location

● Non-Fatal Injury Location

● Low - ● High





CRASHES INVOLVING NON-MOTORISTS

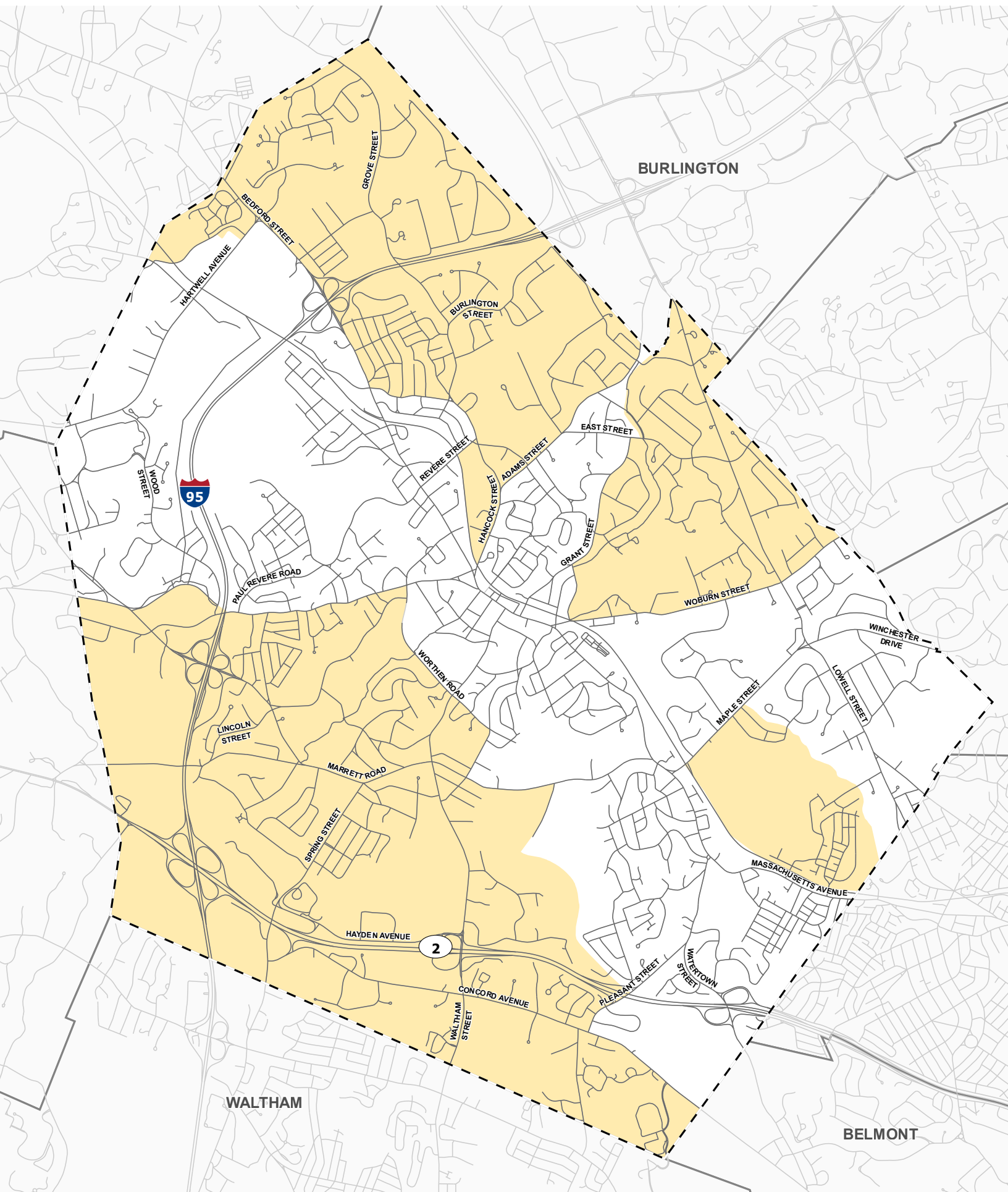
Non-motorists are particularly vulnerable to injuries and fatalities in the event of a traffic collision because they are without the protection of an automobile. As such, the locations of crashes involving pedestrians and bicyclists were mapped to identify where these users are most at risk.

PEDESTRIAN & BICYCLE CRASH LOCATIONS

Lexington, MA

High-Crash Corridors 

-  Pedestrian Crash Location
 -  Low -  High
-  Bicycle Crash Location
 -  Low -  High



COMMUNITIES OF CONCERN

Social equity is at the core of Vision Zero. Lexington is committed to providing safe transportation facilities for all people in the community, especially those areas with historically underserved populations. These geographic areas, generally referred to as “Communities of Concern”, are paid particular attention in transportation safety analysis because compared to people in other neighborhoods, those living in Communities of Concern are more likely to have limited options for getting around and are thus at a higher risk of transportation-related injuries and fatalities.

For the purposes of this Plan, we used Environmental Justice population data from the 2020 Census based on demographic criteria developed by the Massachusetts Executive Office of Energy and Environmental Affairs. A block group is defined as a Community of Concern if one of the following four criteria are true:

- The annual median household income of the block group is not more than 65% of the statewide annual median household income;
- 40% or more of the population identifies as a race other than white;
- 25% or more of the population lacks English language proficiency; or
- 25% or more of the population identifies as a race other than white and the annual median household income of the municipality in which the neighborhood is located does not exceed 150% of the statewide annual median household income.

The adjacent map highlights Communities of Concern within Lexington, which make up approximately 54% of the Town’s geographic area.

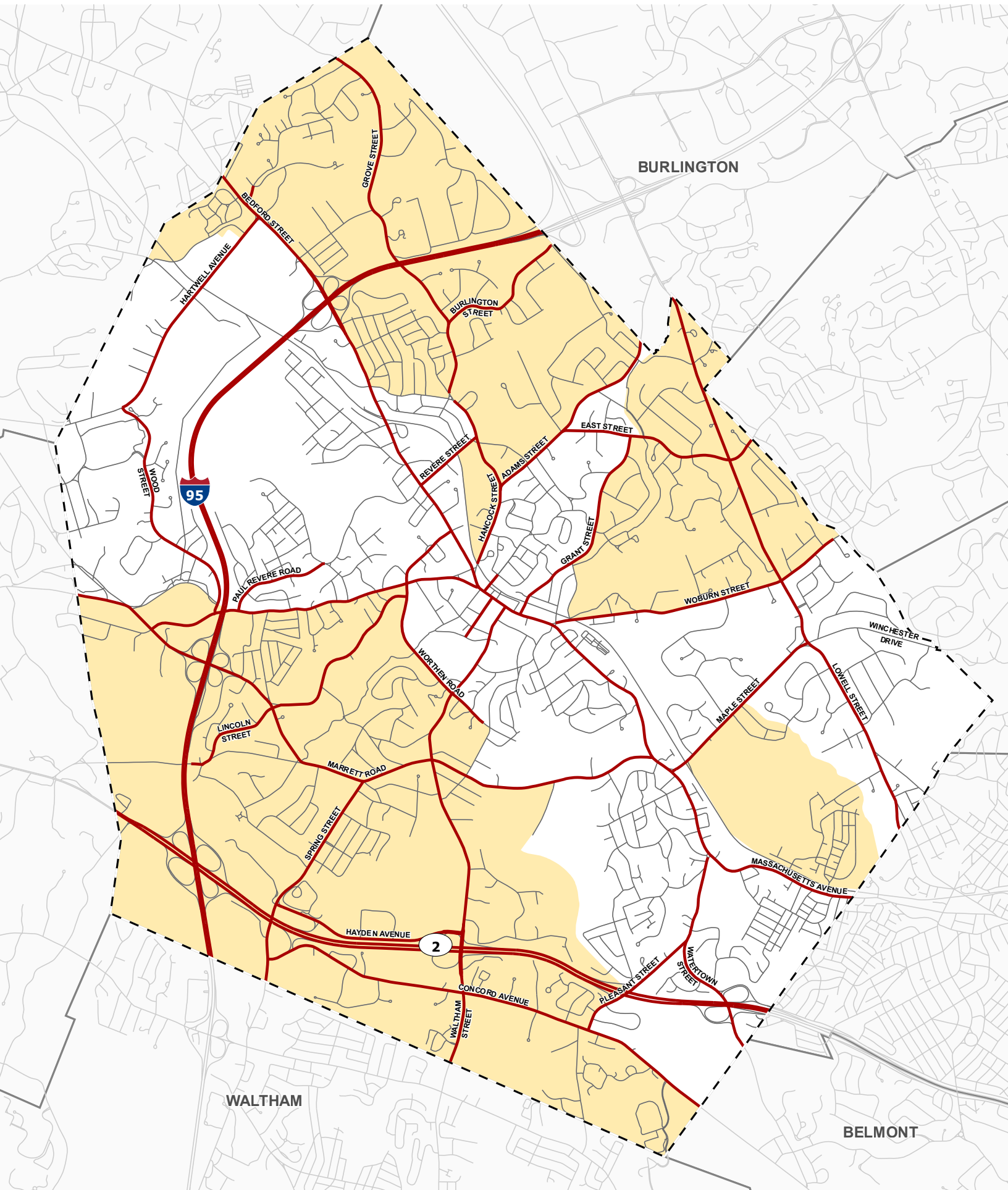


COMMUNITIES OF CONCERN

Lexington, MA



Community of Concern





COMMUNITIES OF CONCERN & THE HIGH-CRASH NETWORK

Approximately 74% of all traffic collisions and 46% of traffic-related injuries and fatalities occurred within Communities of Concern. These areas will be prioritized when implementing safety interventions.

< COMMUNITIES OF CONCERN & THE HIGH-CRASH NETWORK Lexington, MA

High-Crash Corridors —

Community of Concern





DEVELOPING THE PLAN

This development of this Action Plan was a collaborative effort among key stakeholders and the community. Input gathered from this meaningful collaboration informed the plan goals, identification of opportunities, and the development of actions.

TRANSPORTATION SAFETY GROUP

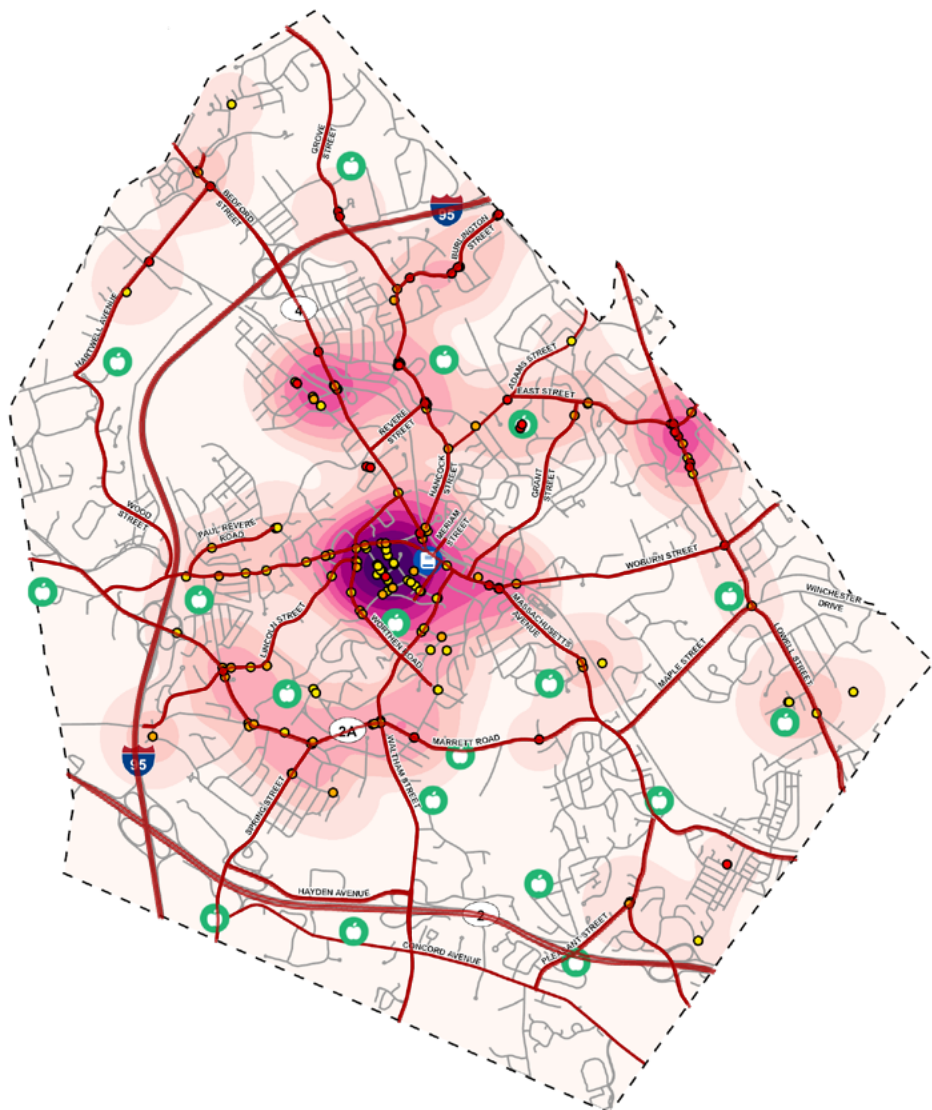
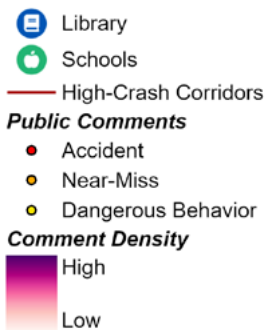
The Lexington Transportation Safety Group (TSG) is a seven-member working group with advisors from four resident committees appointed by the Town Manager that evaluates issues and concerns relative to traffic, transit, pedestrian, bicycle, and parking safety. Members of the group met monthly during the summer of 2022 to establish the Town's Vision Zero goals and identify strategies for eliminating traffic fatalities and serious injuries in Lexington by 2035.

VISION ZERO PUBLIC OUTREACH MEETING

On May 18th, 2022, the Town held a virtual public outreach meeting consisting of a presentation followed by a question and answer session. The presentation, which can be found in Appendix A, provided an introduction to the Transportation Safety Group and consulting team, an overview of the Vision Zero initiative and Safe System approach to traffic safety, traffic safety trends in Lexington, and the process being employed to develop the Action Plan.

> PUBLIC COMMENTS DRIVING HAZARDS

Lexington, MA



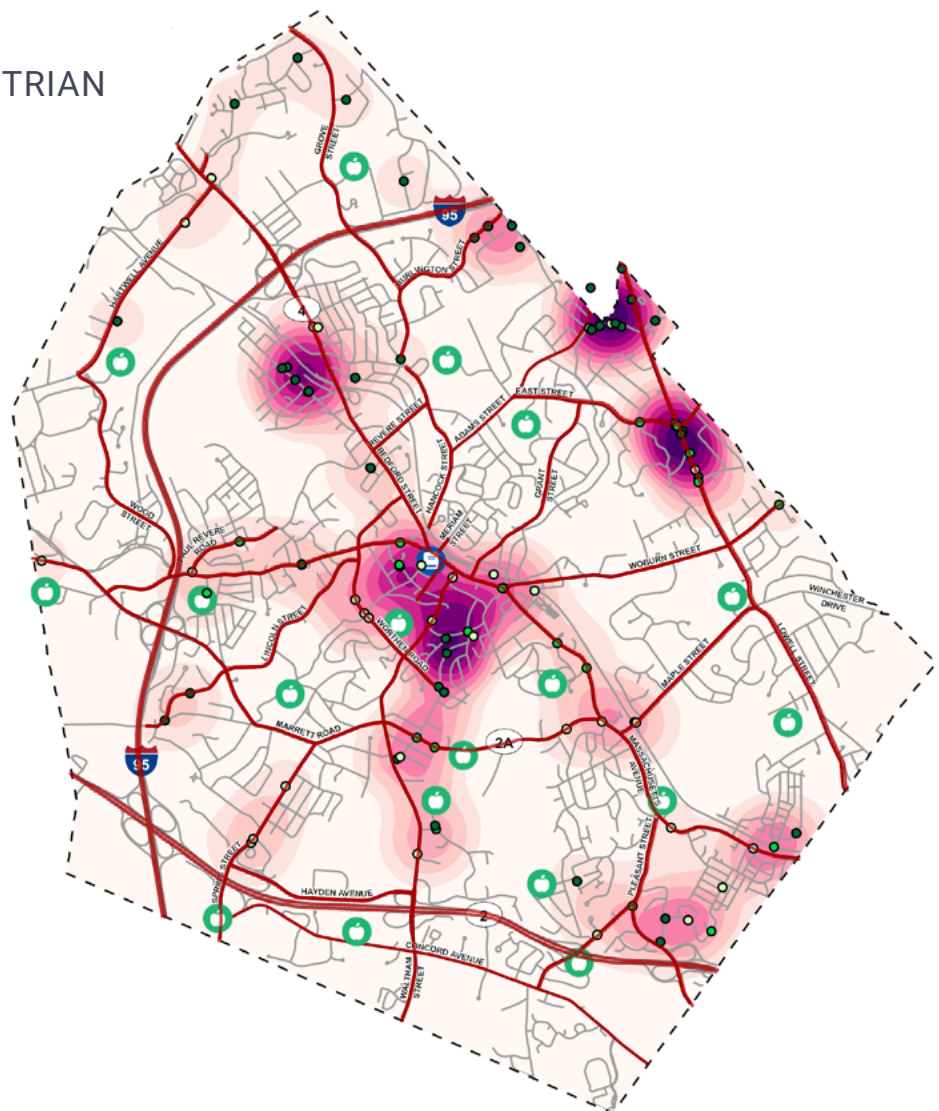
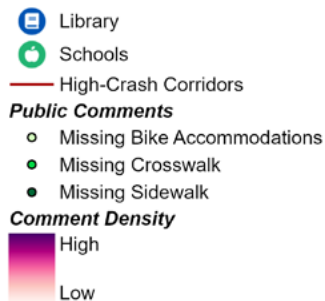
INTERACTIVE MAPPING OUTREACH TOOL

The public was invited to pinpoint locations where they observed safety issues, including near misses, dangerous driving behaviors, and missing bicycle or pedestrian infrastructure, via an online interactive mapping outreach tool. The public was encouraged to participate via the Town website and various news bulletins. Responses were also solicited during a tabling event on May 20, 2022 during Bike, Walk, and Bus Week.

Respondents placed more than 500 pins during the month of June 2022. The responses from this effort, as well as feedback received during the public outreach meeting, helped us understand the current safety challenges that people who travel in Lexington experience and what improvements they want to see.

> PUBLIC COMMENTS MISSING BIKE & PEDESTRIAN INFRASTRUCTURE

Lexington, MA







LET'S TAKE ACTION

Lexington's goal of eliminating traffic-related deaths and serious injuries by 2035 is ambitious and will require ambitious actions by the entire community.

This Action Plan outlines an initial set of actions that Lexington will take to work toward this goal. The plan is intended to be a living document that evolves over time; as we implement action items, we will review the outcomes and identify next steps in an iterative and collaborative process.

OUR VISION

People of all ages and abilities will be able to travel safely and comfortably on Lexington's streets using any mode of travel, and traffic-related deaths and serious injuries will be eliminated by 2035.

OBJECTIVES

- 1** Make Streets Safer for Everyone
- 2** Decrease Travel Speeds
- 3** Promote a Culture of Safety
- 4** Implement Vision Zero Actions in an Equitable Manner
- 5** Use Data to Inform Priorities and Measure Progress
- 6** Create an Institutional Commitment to Vision Zero

OUR TIMELINE

Some actions can be implemented relatively quickly, whereas others will take more time. The actions have been categorized into three timelines:

- Short Term <2 years
- Medium Term 2-5 years
- Long Term 5+ years

LEARNING FROM THE VISION ZERO COMMUNITY

When implementing the actions set forth in this plan, the Town will look to other communities that have successfully reduced or eliminated traffic fatalities and serious injuries through Vision Zero initiatives and learn from their experiences and successes.

Objective 1

Make Streets Safer for Everyone

A Safe Systems approach to transportation safety involves designing transportation infrastructure to accommodate human mistakes and injury tolerances in an effort to reduce the severity of crashes that do occur. Given limited resources, the implementation of proven safety treatments within intersections and along corridors in the High Crash Network will be prioritized.

Strategy 1.1 - Make Intersections Safer

Although intersections are a necessary component of any transportation network, they create points of conflict where crashes can occur. In fact, nearly one-quarter of traffic fatalities and one-half of traffic injuries occur at intersections⁵. Thus, intersection safety should be proactively improved using treatments that have been proven effective to achieve the goal of zero traffic fatalities and serious injuries.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Update the Town's inventory of traffic signal equipment town-wide and create a plan for upgrading equipment to comply with the latest accessibility guidelines if not already compliant				DPW
Implement signal and/or operational modifications proven to prevent serious crashes at one or more intersection annually				DPW
Implement geometric intersection safety treatments with proven safety benefits at one or more intersection annually				DPW

Strategy 1.2 - Make Mid-Block Crossings Safer

Aside from intersections, mid-block crossings represent another point of conflict between motorists and non-motorists that should be proactively addressed to avoid future crashes. There are several tools available for enhancing the visibility of both crosswalks and pedestrians/cyclists at mid-block crossings, with the most appropriate countermeasure for a particular location depending on the roadway width, traffic volume, and speed limit.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Inventory existing mid-block crossings and identify priority locations for improvements using best practices				DPW
Implement safety improvements at two or more mid-block crossings annually				DPW

Strategy 1.3 Expand the Town's Bicycle and Pedestrian Networks

Lexington is committed to expanding the Town's bicycle and pedestrian infrastructure to provide safe, comfortable facilities for non-motorists. Expanding infrastructure for alternative modes of travel not only increases the safety of those already walking and biking but also encourages a reduction in single-occupancy vehicle trips, which is inherently beneficial from a safety perspective. Research has also shown that bicyclists and pedestrians benefit from safety in numbers; when there are more bicyclists and walkers on the streets, drivers are more attuned to their presence⁶.

Efforts to expand the Town's pedestrian and bicycle networks include identifying major corridors on which space can be reallocated within the existing right-of-way to accommodate dedicated pedestrian and bicyclist infrastructure as well as identifying low-speed residential roadways that can comprise a "low-stress network" for non-motorists.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Identify at least two corridors on which dedicated bicycle facilities can be installed within the existing right-of-way in coordination with the Town's Bicycle and Pedestrian Plan, prioritizing corridors within the High-Crash Network				Planning, DPW
Develop a Town-wide Bicycle and Pedestrian Plan to determine priorities for bicycle and pedestrian infrastructure improvements and create a "low stress network" for people to safely get where they want to go.				Planning
Begin implementing the low-stress bicycle network and phase implementation to ensure connectivity				Planning
Construct dedicated bicycle facilities on at least two corridors to encourage low-impact travel modes				DPW

Objective 2

Decrease travel speeds

Promoting safe and context-appropriate vehicle speeds is a core component of the Safe System approach. Across all modes of transportation, both the risk of a crash occurring and the risk of a crash resulting in serious injury or death increase significantly with travel speed. As a result, evidence has shown that even small reductions in speed can result in significant safety benefits⁷.

Strategy 2.1: Design or redesign roads and intersections to manage travel speeds

One of the most effective ways to reduce travel speeds is through traffic calming measures, or physical road design elements intended to reinforce the desired operating speed of a facility and increase driver attentiveness. Traffic calming measures can include narrowing the actual or apparent width of a roadway or introducing horizontal and/or vertical deflections into the roadway⁸.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Review Town's Traffic Calming Policy and update as appropriate to include additional traffic calming measures based on current best practices				DPW
Re-evaluate typical cross-sections for various street types and widths to promote safe speeds based on best practices	Ongoing			DPW
Implement traffic calming measures within intersections and along key corridors within High Crash Network based on best practices	Ongoing			DPW

Strategy 2.2: Use traffic management measures to reduce neighborhood cut-through traffic

Many neighborhoods within Lexington have experienced an increase in cut-through traffic due to navigation apps, such as Waze. Excessive cut-through traffic can represent a safety issue for neighborhood streets both due to the increased volume of traffic and given that such traffic tends to operate at a higher speed than local traffic. Traffic management measures, such as the application of turn restrictions, can be used in certain situations in combination with traffic calming techniques to keep regional traffic on the right roads.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Develop methodology for determining the neighborhoods in which traffic studies should be conducted to reduce cut-through traffic				TSG
Conduct traffic studies for at least two neighborhoods for which cut-through traffic presents a safety concern and implement measures for reducing cut-through traffic as appropriate based on study findings				Planning
Collaborate with nearby communities regarding best practices to reduce cut through traffic				Planning, Police

Strategy 2.3: Reduce speed limits

Although lower speed limits do not inherently prevent dangerous behavior, they provide a cue to motorists that caution is warranted. As the Town implements traffic calming measures and expands infrastructure for non-motorists, the speed limits on roadways where multimodal activity and crossing conflicts occur should be decreased to fit the context.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Evaluate posted speed limits town-wide and identify key corridors for which engineering studies should be performed to lower the posted speed limit or establish a safety zone				Planning
For corridors on which traffic calming measures have been implemented, measure new travel speeds and evaluate whether the speed limit should be lowered				Planning

Strategy 2.4: Enforce safe speeds

For some motorists, the most effective way to encourage safe behaviors is through enforcement. Vision Zero communities use evidence-based enforcement techniques, including both automated tactics and police officers.

Although automated enforcement is not currently legal in Massachusetts, several bills have been introduced into legislation to allow municipalities to opt into installing cameras that would issue tickets for speeding, failure to stop at a red light, failure to stop at a school bus stop arm, blocking the box, and parking or driving in a dedicated bus lane. The Massachusetts Vision Zero Coalition has publicly supported these bills due to the proven effectiveness of automated enforcement in reducing speeding and enforcing traffic laws in an equitable manner⁹.

Enforcement efforts should be combined with education efforts to maximize impact and promote equitable outcomes.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Conduct high-visibility targeted enforcement actions that address speeding, distractions, and impairment, particularly within the High-Crash Network, in school zones, and near activity areas with high pedestrian activity	Ongoing			Police
Consider publicly supporting and advocating for legislation to allow municipalities to opt into automated enforcement to address excessive speeds and traffic light violations.				Select Board
Collaborate with nearby communities and Vision Zero communities regarding best practices for enforcement and update standard protocols as appropriate based on findings				Police

Objective 3

Promote a Culture of Safety

Infrastructure improvements will be most effective when supported by good user behavior. The Town will engage the public in a variety of engagement and educational activities to promote a culture of safety in both residents and visitors.

Strategy 3.1: Educate residents about safe travel habits and the implications of unsafe behaviors

A comprehensive safety education campaign that targets all street users—including drivers, pedestrians, and bicyclists—will help raise awareness of the importance of safe behaviors regardless of travel mode.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Initiate public information campaign to educate residents of the dangers of distracted and impaired driving, walking, and biking and the correlation between speed and crash severity				TSG
Continue implementing bicycle safety campaigns in coordination with the Safe Routes to School Program	Ongoing			Transportation Services, Schools
Consider implementing a “wait & wave” program that uses pavement markings to encourage pedestrians to wait before crossing the road and wave to motorists after stopping				DPW

Strategy 3.2: Expand and support Safe Routes to School activities

Safe Routes to School is an important program for promoting walking and bicycling to school through infrastructure improvements, tools, and safety education. Although elementary schools in Lexington already participate in this program, there are potential benefits from aligning the Town’s Safe Routes to School and Vision Zero initiatives¹⁰. For instance, Safe Routes to School advocates can draw upon best practices from Vision Zero communities to develop a list of recommendations to advocate for in their own community’s Vision Zero undertaking, and the Safe Routes to School program can be leveraged by Vision Zero advocates to create a culture of traffic safety in school-aged children, parents, and caregivers¹¹.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Through the Safe Routes to School Program, support and expand hands-on bicycle and pedestrian education programs for children and caregivers				Transportation Services, Schools
Through the Safe Routes to School Program, support and expand walk- and bike-to-school events				Transportation Services, Schools

Strategy 3.3: Encourage a reduction in vehicle miles traveled throughout Lexington

Reducing the number of cars on the road – in addition to having an environmental benefit – also has an inherent safety benefit that aligns with the goal of eliminating traffic fatalities and serious injuries. First, fewer cars means fewer opportunities for a collision involving a car to occur. Second, as noted under Strategy 1.3, bicyclists and pedestrians benefit from safety in numbers. Efforts to reduce vehicle miles traveled with target school-related travel, general travel, and delivery preferences to reduce the number of delivery vehicles on the road.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Review existing school busing policies and fees to increase school bus usage				School Committee
Consider a shared Lexpress and School Bus pass program				Transportation Services, School Committee
Expand amenities for bicyclists, such as bike racks, in activity centers, around schools, and near other points of interest to encourage bicycling				Transportation Services
Identify ways to discourage single-occupancy vehicle travel to and from schools, including requiring permits to park at school and changes to the School Handbook language, and establish joint meetings with School Committee and Select Board members to spearhead effort				School Committee, SB
Encourage a reduction in vehicle miles travelled within Lexington by initiating public information campaigns about the benefits of using lower-impact travel modes and changing e-commerce habits				TSG
Consider stronger transportation demand management (TDM) measures to incentivize a reduction in single-occupancy vehicle trips				Planning
Continue updating sidewalk inventory to identify sidewalk deficiencies and prioritize improvements	Ongoing			DPW

Objective 4

Implement Vision Zero Actions in an Equitable Manner

Social equity is a core component of Vision Zero. Low-income households, people with disabilities, the elderly and youth, people of color, and people with limited English proficiency often have face greater barriers to safe transportation than the general population. Lexington is committed to eliminating and preventing any disparate effects that our policies and actions may have on different members of the community and to ensuring that engagement efforts reach all vulnerable populations.

Strategy 4.1: Implement safety improvements equitably

Traffic safety problems are the result of patterns of disinvestment and underinvestment in certain communities¹². Accordingly, these communities deserve to be prioritized when making new investments in traffic safety.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Use Census data and other equity-related indicators, overlaid with crash data, to identify top transportation safety issues within Communities of Concern				TSG
Ensure safety improvements within Town are implemented in a geographically equitable manner while still prioritizing locations within High-Crash Network				Planning, DPW
Consider vulnerable road users and all travel modes when prioritizing safety improvements				Planning, DPW

Strategy 4.2: Engage with all stakeholders when performing public outreach

Communities of concern have been historically left out of transportation planning conversations. We'll use a variety of tactics to make sure that Vision Zero engagement includes all stakeholders.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Prioritize engagement with vulnerable stakeholders in transportation safety-related efforts, including making sure all engagement materials are available in different languages and to people of different abilities	Ongoing			Planning

Objective 5

Use Data to Inform Priorities and Measure Progress

Our knowledge of safety issues is only as good as the data and information available to us. In order to continuously learn about safety issues in Lexington and respond to them appropriately, we need to improve both the quantity and quality of information available. Furthermore, data regarding Vision Zero actions and progress will be made public to promote transparency and build trust with stakeholders and residents.

Strategy 5.1: Expand Crash and Speed Data Records

Comprehensive and detailed information on both crashes and dangerous driving behaviors, such as speeding and distracted driving, will be critical for understanding traffic safety priorities moving forward.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Update the Town's crash documentation system to retain crash records for at least 10 years				Police
Develop a method for stakeholders to anonymously report unreported collisions and near-misses				TSG, Police
Invest in "smart" equipment that allows for the collection of data through daily operations (e.g., speed feedback signs that collect speed data)				DPW
Generate new High-Crash Network mapping every 5 years and analyze the factors contributing to crashes using latest crash data				TSG

Strategy 5.2: Routinely evaluate the performance of Vision Zero actions and report progress to the public

To understand what safety projects are most beneficial for reducing crashes, fatalities, and serious injuries, the impacts of safety interventions must be regularly studied. Successes and challenges will be shared with stakeholders and the public to promote transparency.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Create a webpage on the Town website that will act as the central source for traffic safety information in Lexington, including project updates and key resources and a method to report safety issues in a streamlined manner				TSG
Conduct before-and-after studies on the impacts of Vision Zero actions, including safety projects installed within the High-Crash Network				TSG
Publish available data regarding Police Department's traffic stop activities on Town website				Police
As part of TSG's annual reporting, provide an annual Vision Zero Status Report that documents the implementation status of the Action Plan, tracks progress toward reducing serious injuries and fatalities, and summarizes the effects of implemented safety interventions				TSG

Objective 6

Create an Institutional Commitment to Vision Zero

Achieving the goal of zero traffic fatalities and serious injuries requires the participation of all levels of government as well as the public. Early-adopter cities of Vision Zero in the United States have found that creating an institutional commitment to Vision Zero is a critical component for building a strong base for Vision Zero success¹³.

Strategy 6.1: Update Town Processes to Prioritize Safety

Although Lexington has long prioritized traffic safety, Town processes can be updated to institutionalize that commitment. A public commitment to the goal of zero traffic fatalities and serious injuries by elected officials will, in combination with annual reporting, provide accountability toward achieving our Vision Zero goal, and dedicating Town funds for the implementation of Vision Zero-related transportation projects and coordination will give us the resources to make that goal a reality.

ACTION	TIMELINE (YEARS)			LEAD
	1-2	3-4	5+	
Encourage all elected officials and Town department leaders to commit to collaborating toward the goal of zero traffic fatalities and serious injuries by 2035				Select Board
Consider the establishment of a dedicated Vision Zero fund for implementation of Action Plan and coordination among departments if it is determined that existing Capital and operations budgets cannot support the plan				Select Board
Continue holding regular Transportation Safety Group meetings to review data and ongoing traffic safety performance and identify strategies for improvement				TSG



Lexington Transportation Services



TRACKING OUR PROGRESS

Several performance measures have been identified to track progress toward achieving the Action Plan goals.

The Town will provide annual updates on the Vision Zero plan that will report on these measures.

- Number of crashes by mode, normalized by the population
- Number of traffic injuries and fatalities by mode, normalized by the population
- Percentage of the High Crash Network with new street safety improvements
- Percentage of street safety improvements made in communities disproportionately impacted by traffic fatalities and serious injuries
- Miles of sidewalk and bike infrastructure constructed and maintained
- Commute mode share



APPENDIX A

PUBLIC OUTREACH MEETING PRESENTATION

On May 18th, 2022, The Town's consultant Environmental Partners hosted a Vision Zero Transportation Safety Public Meeting. The presentation that accompanied the meeting is provided within this section.



ENVIRONMENTAL
sp PARTNERS
— An Apex Company —

THE VISION ZERO TRANSPORTATION SAFETY PUBLIC MEETING WILL BEGIN SHORTLY

- Please submit questions through the “Q&A” feature
- The presentation is being recorded
- Thank you for joining in!

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VISION ZERO TRANSPORTATION SAFETY PUBLIC MEETING

May 18th, 2022



ENVIRONMENTAL
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AGENDA

- Introductions
- Project Background
- Safety Concerns in Lexington
- Next Steps



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TRANSPORTATION SAFETY GROUP



EP TEAM



STAKEHOLDERS



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TRANSPORTATION SAFETY GROUP

Representatives from:

- Police
- Engineering
- Planning
- School
- Transportation Services



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EP TEAM



Margot E. Schoenfelder
PE, AICP
PROJECT MANAGER



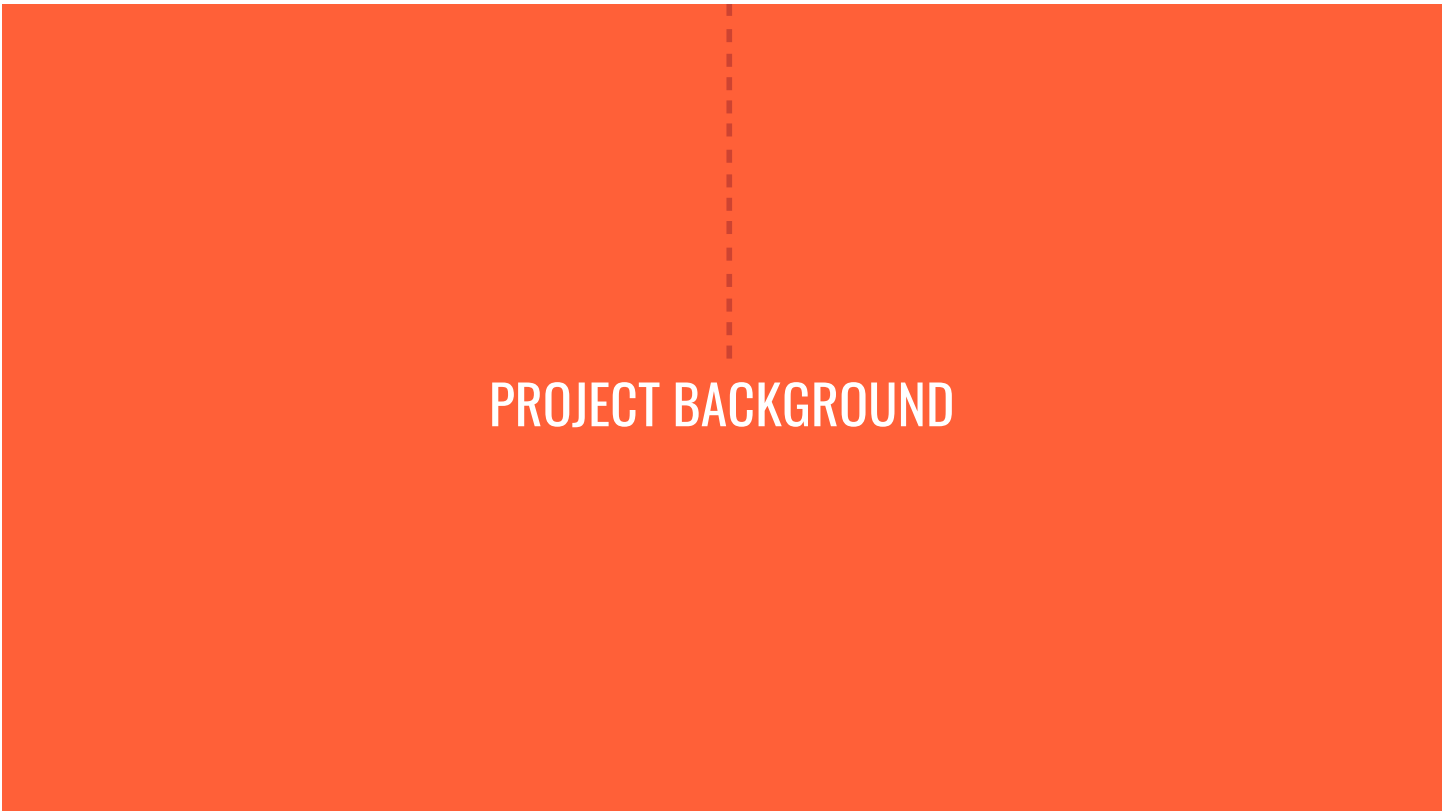
James D. Fitzgerald
PE, LEED AP
DIRECTOR OF TRANSPORTATION | PRINCIPAL



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VISION ZERO

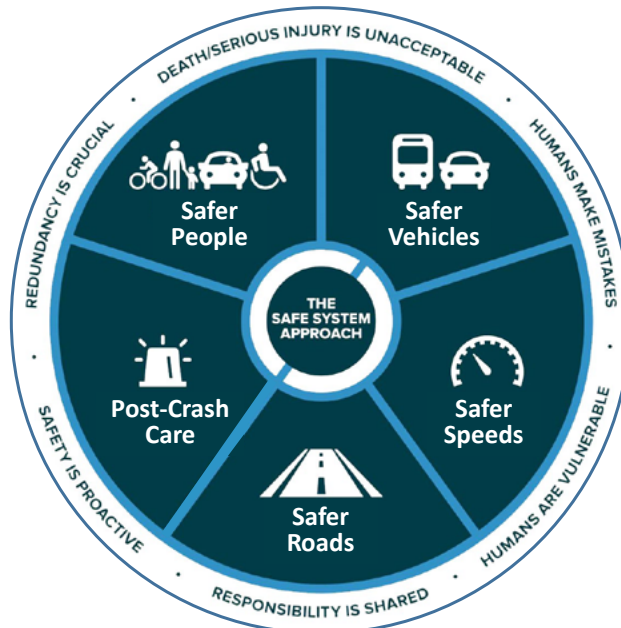
A vision for road safety in which **all traffic fatalities and serious injuries** are eliminated while promoting safe, healthy, equitable **mobility for all**

Traditional Approach	VS	Vision Zero
<ul style="list-style-type: none">• Traffic fatalities are inevitable• Perfect human behavior• Prevent collisions• Individual responsibility• Saving lives is expensive		<ul style="list-style-type: none">• Traffic fatalities are preventable• People will make mistakes• Prevent fatalities & serious injuries• Responsibility is shared• Multi-disciplinary systems approach• Saving lives is not expensive



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SAFE SYSTEM APPROACH



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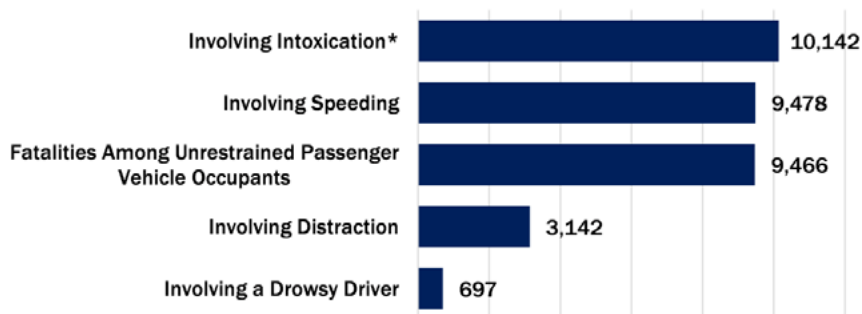
SAFE SYSTEM APPROACH

SAFER PEOPLE

Encourage **safe, responsible behavior** by people who use our roads and create conditions that prioritize their ability to reach their destination unharmed



2019 Fatalities Involving Risky Behaviors



*At least one driver with Blood Alcohol Concentration .08 g/dL or higher
Source: Fatality Analysis Reporting System



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SAFE SYSTEM APPROACH

SAFER VEHICLES

Expand the availability of vehicle systems and features that help to **prevent crashes** and **minimize the impact of crashes**



FMVSS Number and Topic	Lives Saved, 1960-2012
208/209/2010 Seat belts	329,715
203/204 Energy-absorbing steering assemblies	79,989
208 Frontal air bags	42,856
206 Door locks, latches, and hinges	42,135
201 Occupant protection in interior impact	34,477
214 Side impact protection (incl. side air bags)	32,288
105/135 Dual master cylinders/front disc brakes	18,350
213 Child safety seats	9,891
212 Adhesive windshield bonding	9,853
126 Electronic Stability Control	6,169
216 Roof crush resistance	4,913
108 Trailer conspicuity tape	2,660
226 Rollover curtains	178
301 Fuel system integrity	26

Source: Kahane, C. J. (2015, January). Lives saved by vehicle safety technologies and associated Federal Motor Vehicle Safety Standards, 1960 to 2012 – Passenger cars and LTVs – With reviews of 26 FMVSS and the effectiveness of their associated safety technologies in reducing fatalities, injuries, and crashes. (Report No. DOT HS 812 069). Washington, DC: National Highway Traffic Safety Administration.

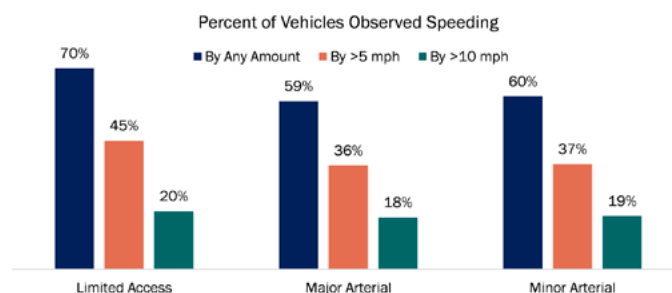


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SAFE SYSTEM APPROACH

SAFER SPEEDS

Promote **safer speeds** in all roadway environments through a combination of thoughtful, context-appropriate roadway design, targeted education and outreach campaigns, and enforcement



Sources: Fatality Analysis Reporting System; Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories in 2020, DOT HS 813 118, June 2021; AAA Foundation for Traffic Safety, Impact of Speed and a Pedestrian's Risk of Severe Injury or Death, <https://aaaafoundation.org/impact-speed-pedestrians-risk-severe-injury-death/>; National Traffic Speeds Survey III: 2015, DOT HS 812 485, March 2018.

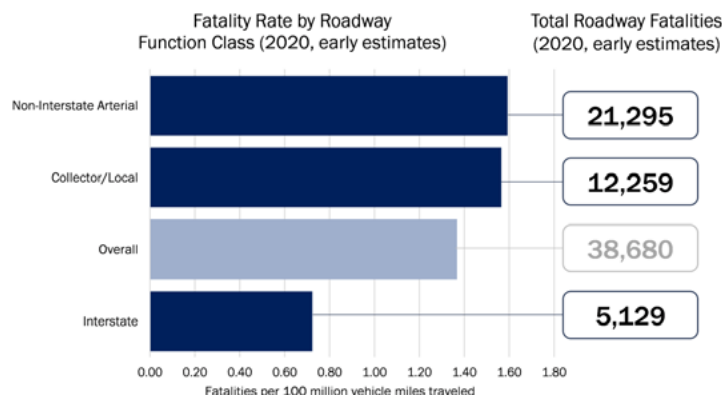


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SAFE SYSTEM APPROACH

SAFER ROADS

Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users



Source: Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories in 2020, DOT HS 813 118, June 2021



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SAFE SYSTEM APPROACH POST-CRASH CARE



Enhance the survivability of crashes through access to emergency medical care while creating a safe working environment for vital first responders and preventing secondary crashes



20% OF TRAUMA DEATHS
ARE PREVENTABLE WITH OPTIMAL EMERGENCY AND TRAUMA CARE¹

2 OUT OF 5 WERE ALIVE WHEN FIRST RESPONDERS
ARRIVED BUT LATER DIED²

THERE IS A
25%
INCREASE IN THE ODDS OF SURVIVAL
FOR SEVERELY INJURED PATIENTS IF TREATED IN A HOSPITAL THAT
IS A LEVEL I TRAUMA CENTER⁴

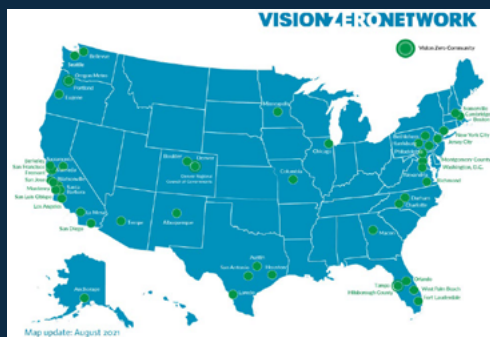
Sources: (1) National Academies of Sciences, Engineering and Medicine. A National Trauma Care System: Integrating Military and Civilian Trauma Systems to Achieve Zero Preventable Deaths After Injury. (2) Early estimate, NHTSA Fatality Analysis Reporting System (FARS). (3) NHTSA National Automotive Sampling System-Crashworthiness Data System (NASS-CDS). It is not known the percentage who were later transferred to a level I or II trauma center. (4) Mackenzie et al. 2006. This study compared level I trauma centers to non-trauma centers.



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VISION ZERO

40+ cities
IN THE U.S



SOURCE: [HTTPS://VISIONZERONETWORK.ORG/](https://visionzeronetwork.org/)

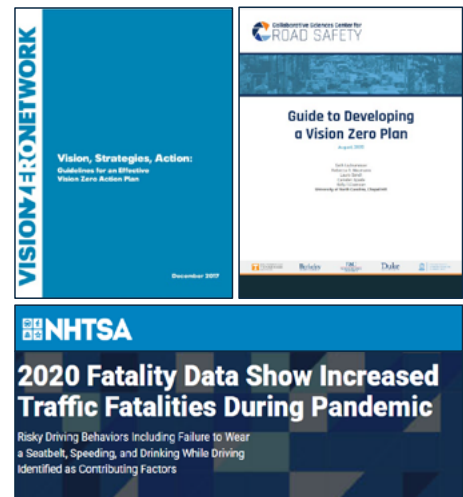
3 cities
IN MASSACHUSETTS



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RECENT MOMENTUM

- Increasing number of case studies and literature on best practices
- Statistical increase in rate of traffic fatalities
- Funding opportunities through the US Department of Transportation's *Safe Streets and Roads for All* program



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SAFETY CONCERNS IN LEXINGTON

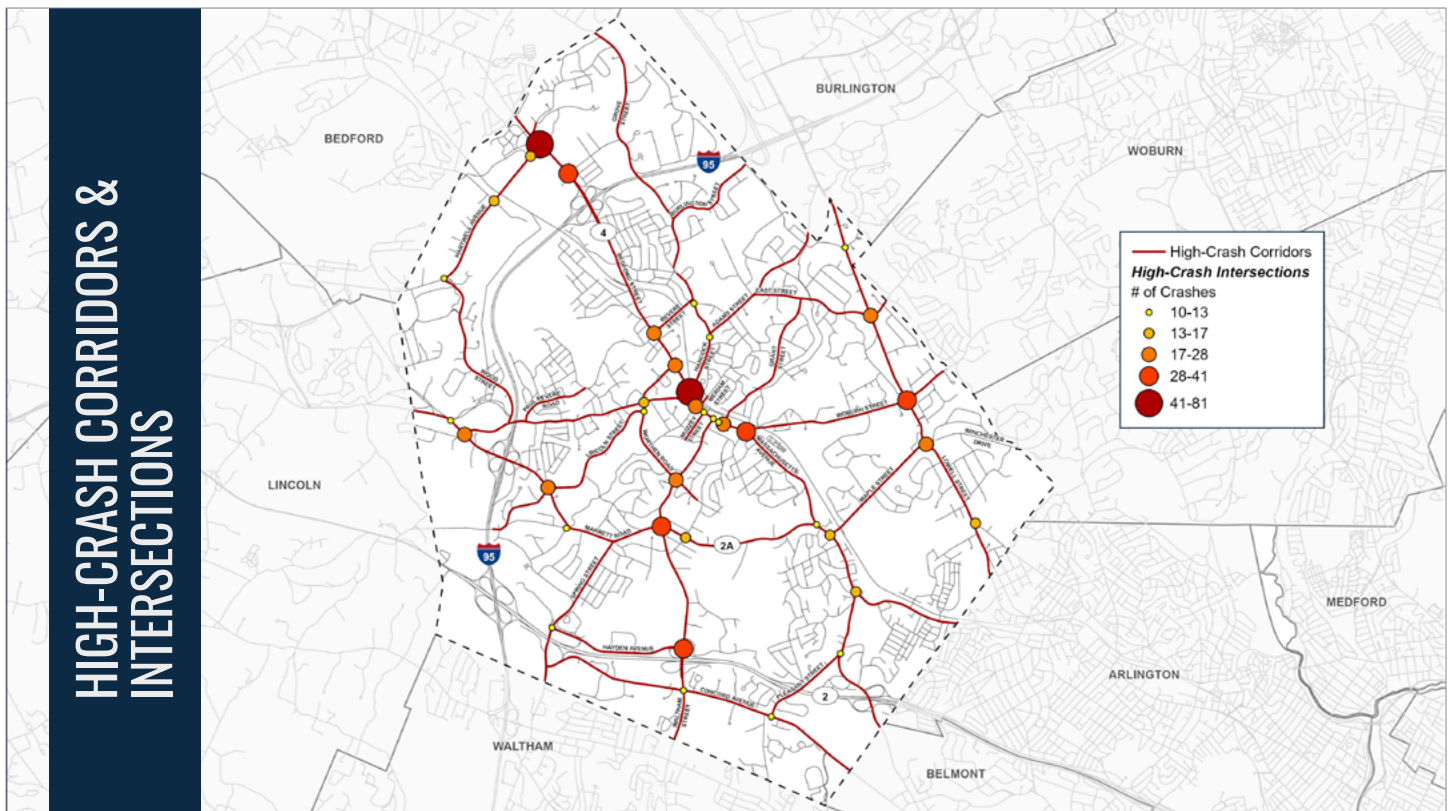
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SAFETY CONCERNS

- Crash history
- Near misses
- Future developments & mobility trends

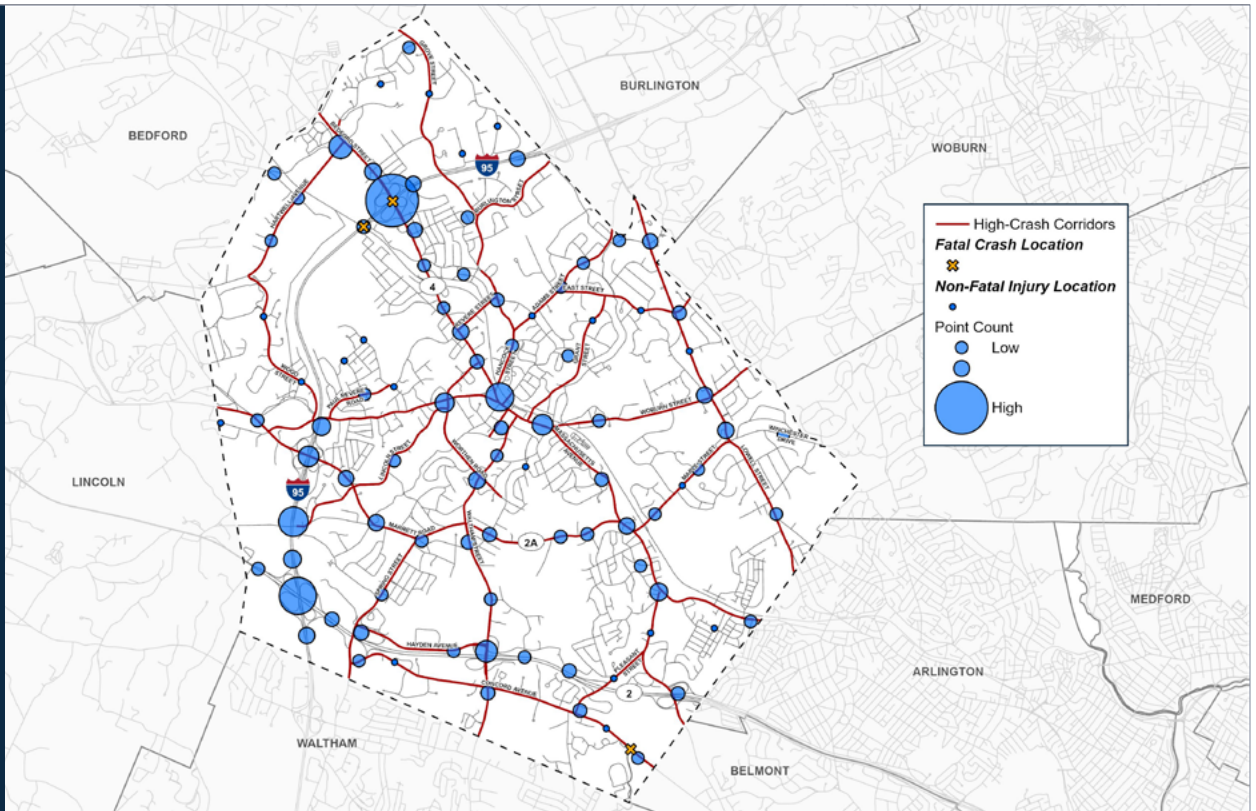


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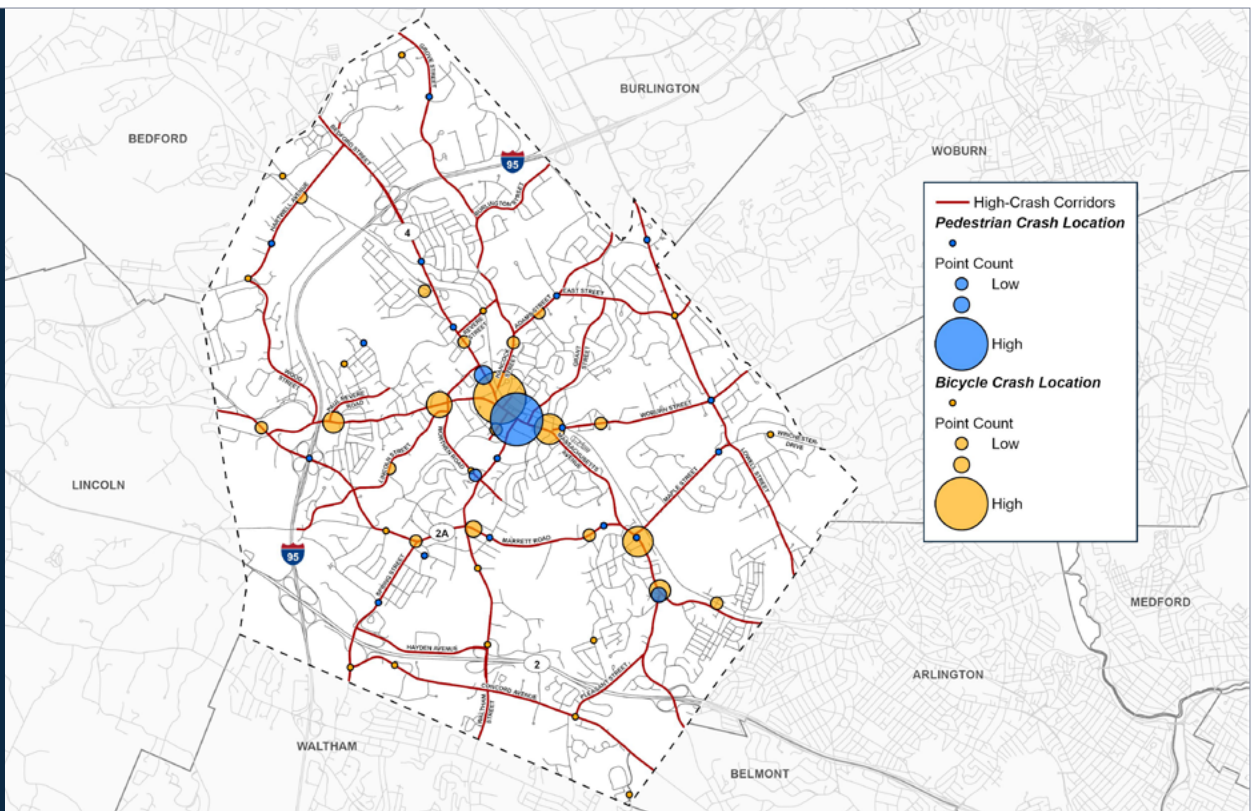
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CRASHES WITH NON-FATAL INJURIES & FATALITIES



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CRASHES INVOLVING PEDESTRIANS & BICYCLISTS



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EXAMPLE STRATEGIES



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COMPLETE STREETS

- Complete Streets create a safe, connected, and equitable transportation network for travelers of all ages and abilities
- No singular design prescription for Complete Streets – based on community context



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PROVEN SAFETY COUNTERMEASURES

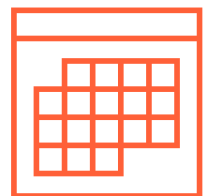
- Published by FHWA
- Collection of 28 countermeasures and strategies that can offer significant, measurable impacts as part of any data-driven, systemic approach to improving safety



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NEXT STEPS

- Bike to Work Breakfast – May 20th, 2022
- May – June 3rd, 2022: Public input via Public Comment Tool
- May – July 2022: Development of Strategies & Preparation of Action Plan
- July 2022: Adoption of Action Plan
- July – August 2022: Identification of Highest-Priority Projects
- August – September 2022: Submission of Funding Application to USDOT



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Lexington Vision Zero Public Comment Tool

Help the Town of Lexington create a Vision Zero Action Plan to eliminate traffic fatalities and serious injuries. As the first step, the Town is soliciting input from the public regarding existing transportation hazards, dangerous traffic behaviors, or missing infrastructure. Please help us in this effort by mapping specific locations where you have noticed hazards, dangerous traffic behaviors, near-misses, or infrastructure deficiencies.

Please spread the word using the following link:
<https://tinyurl.com/3md2x78x>

This mapping tool will be OPEN until: 6/3/2022

How to leave a comment:

1. Select the 'Comment' tool in the top right
2. Select a hazard type or dangerous driving
3. Click on the location you want to highlight
4. Provide specifics in the pop-up and hit 'Save'

You may input multiple entries. Please zoom-in so that the pin locations are as accurate as possible.

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For questions, concerns, or comments about this tool, please contact dug@envpartners.com

Comment

Select a template to create features

Accident

Near-Miss

Dangerous Behavior

Other Hazard

Missing Sidewalk

Missing Crosswalk

Missing Bike Infrastructure

Other

Visit

<https://tinyurl.com/3md2x78x>

PUBLIC COMMENT TOOL HOW-TO

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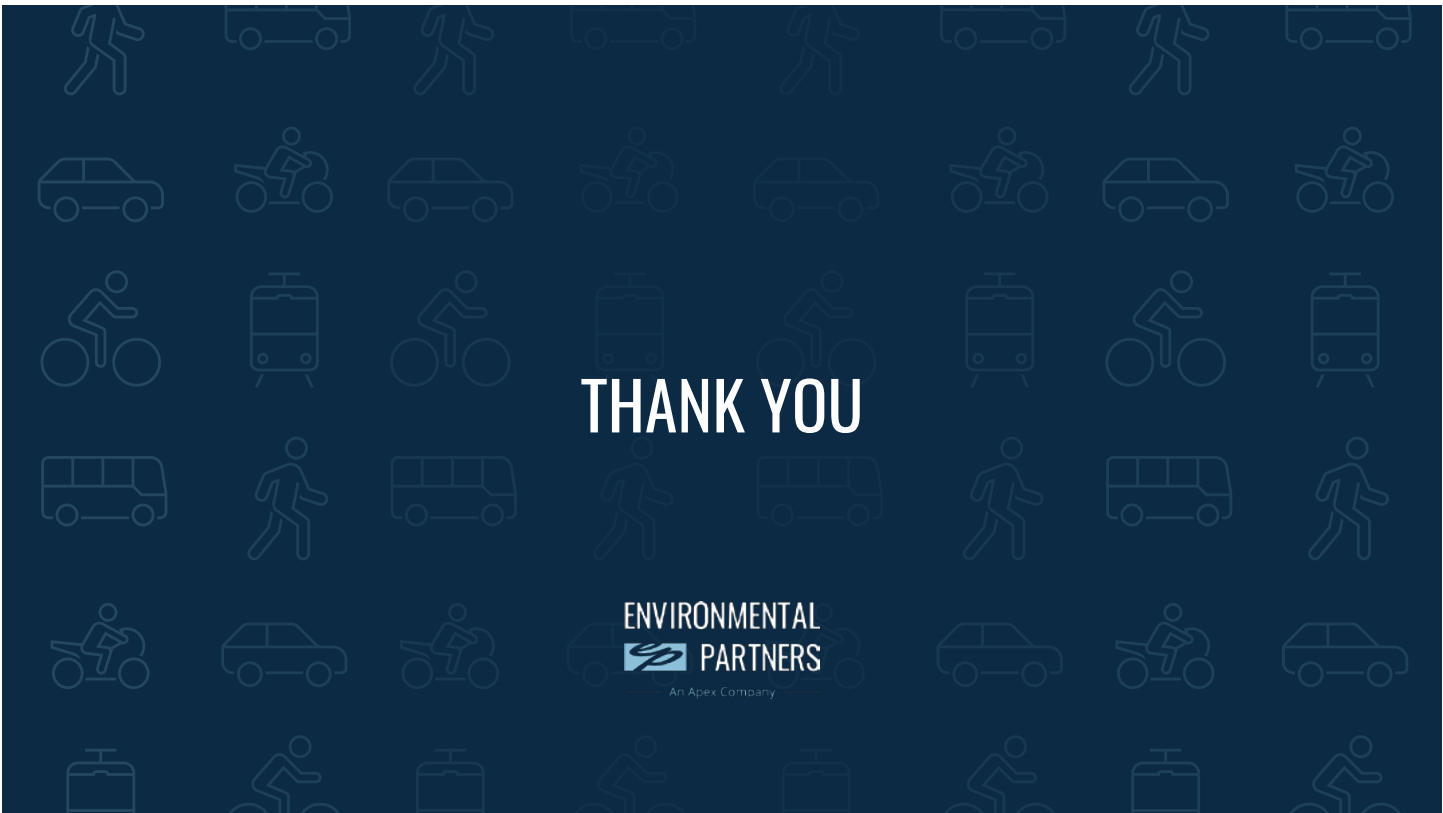
Q&A

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We can eliminate all traffic-related
fatalities and serious injuries.
Together.





VISION ZERO

ACTION PLAN

Lexington, MA | 08.15.22